

WHAT IS CLAIMED IS:

1. A method for generating an output signal locked to an input signal, the method comprising:

receiving at a detector the input signal and a reference signal;

generating a detector output signal indicative of a difference between the input signal and the reference signal;

receiving the detector output signal at a first filter coupled to the detector and providing a filtered detector output signal;

receiving the filtered detector output signal at a transconductance (gm) amplifier coupled to the first filter and providing a current output signal;

receiving the current output signal at a second filter coupled to the gm amplifier and providing a control signal; and

receiving at an oscillator coupled to the second filter the control signal and providing an oscillator signal having a property that is adjusted by the control signal.

2. The method of claim 1, wherein the first filter is a single-pole RC filter.

3. The method of claim 1 further comprising:

receiving at a divider coupled to the oscillator the oscillator signal and dividing the oscillator signal for generating the reference signal.

4. The method of claim 1, wherein the input signal is a serial data stream.

5. The method of claim 4, wherein the serial data

stream has a data rate of at least 2.488 GHz.

5            6.    The method of claim 1, wherein the gm amplifier includes a differential amplifier receiving the filtered signal and a current load circuit coupled to the differential amplifier providing the current output signal.

10           7.    The method of claim 1, wherein the detector output signal has a peak-to-peak signal swing of less than one volt.

15           8.    The method of claim 1, wherein the reference signal is a reference clock signal.